



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,939	06/22/2001	Christopher J. Marxen	2001P11061US	7697
7590 12/15/2004			EXAMINER	
JOEL MILLER, ESQ. 17 WESTWOOD DRIVE SOUTH WEST ORANGE, NJ 07502			NI, SUHAN	
			ART UNIT	PAPER NUMBER
			2643	
DATE MAILED: 12/15/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/887,939

Applicant(s)

MARXEN ET AL.

Examiner

Suhan Ni

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

SUHAN NI
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to the amendment dated 08/23/2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 and 17-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Topholm et al. (U. S. Pat. - 5,487,012) in view of Widmer et al. (U. S. Pat. - 6,595, 317).

Regarding claim 17, Topholm et al. disclose an apparatus for fabricating a shell for an ITE type hearing device having at least one component, comprising: a scanner (col. 5, line 14) for obtaining a digital representation (13) of a portion of the ear canal (11-12); a processor (B) for creating a digital representation of a shell (14) conforming to the digital representation of the portion of the ear canal; and means (C) of adjusting for fitting the digital representation of the shell in the digital representation of the ear canal. But Topholm et al. do not clearly teach of adjusting a digital representation of **the outer surface** of the shell in the digital representation of the ear canal as claimed. Widmer et al. disclose a similar structured apparatus for fabricating a shell for an ITE type-hearing device having at least one component and/or structural element (31). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide one or more suitable component and/or structural element, such as a surface vent (31) taught by Widmer et al. for the component database (15) for further adjusting the

Art Unit: 2643

digital representation of **the outer surface** of the shell in the digital representation of the ear canal as an alternate choice, in order to effectively and efficiently manufacture the hearing device.

Regarding claims 18-20, neither Topholm et al. nor Widmer et al. clearly teach of reducing the number of points, or pixels/voxels as claimed. Since reducing image resolutions or efficiently and effectively selecting a suitable resolution for image processing is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide or set reasonably reduced number of pixels for any port of the image processing, especially in 3-D data formation, rendering, reconstruction, and displaying, in order to effectively and efficiently obtain and process the imaging data for further manufacturing the hearing device.

Regarding claim 21, Topholm et al. further disclose the apparatus for fabricating a shell for an ITE type-hearing device by direct manufacture (D).

Regarding claims 25-27, Topholm et al. further disclose the apparatus for fabricating a shell for an ITE type hearing device, wherein means for adjusting the fit of the outer surface of the shell comprises means for modifying at least one physical dimension of the digital representation of the outer surface of the shell (col. 4, lines 8-15 and col. 5, lines 17-24) as claimed.

Method claims 1-15, 22-24 and 28 are similar to claims 17-21 and 25-27 except for being couched in method terminology; such methods would be inherent when the structure is shown in the references.

Response to Amendment

3. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

5. Any response to this final action should be mailed to:

**Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED PROCEDURE"), or

(703) 305-9508, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to:

Receptionist, Sixth Floor,

Art Unit: 2643

**Crystal Park II,
2121 Crystal Drive,
Arlington, Virginia 22202**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(703)-308-9322**, and the number for fax machine is **(703)-305-9508**. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at **(703) 305-4708**.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(703) 305-3900**.

SN

December 10, 2004


SUHAN NI
PRIMARY EXAMINER